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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,164	12/31/2003	J. Nelson Wright	341148020US	5009

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PATENT-SEA

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EXAMINER

KISH, JAMES M

ART UNIT

PAPER NUMBER

3737

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/750,164	Applicant(s) WRIGHT ET AL.	
	Examiner James Kish	Art Unit 3737	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herron et al. (US Patent Application No. 2004/0125916) in view of Doi (US Patent Application No. 2004/0101073), further in view of Dimmer'842 (US Patent No. 6,812,842). Herron et al. discloses a system for the localization of a leadless marker in a 3-D space, which is secured on and/or implanted in a patient's body. The system uses a linear accelerator to deliver a radiation beam to a selected target in a patient (see paragraph [0023]). However, Herron does not discuss a correlation processor for coherent detection. Doi teaches to utilize a correlation processor, which performs correlation processing respectively between each of the plurality of received signals (see paragraph [0017]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a correlation processor as taught by Doi in place of an ordinary signal processor to estimate a phase error in the received signals (paragraph [0017]). Neither Herron nor Doi discuss a need for the radiation source to be inactive while measuring the marker

signals. Dimmer teaches a termination of the excitation signal before a measurement phase (column 4, lines 43-45). It would have been obvious to one having ordinary skill in the art at the time the invention was made to de-activate the excitation source prior to measuring the marker to avoid the difficult process of separating the small marker signal from the much more powerful source excitation signal (column 6, lines 38-42).

2. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herron et al. (US Patent Application No. 2004/0125916) in view of Doi (US Patent Application No. 2004/0101073), further in view of Dimmer'842 (US Patent No. 6,812,842), even further in view of Acker'129 (US Patent No. 5,729,129). Herron et al. discloses a system for the localization of a leadless marker in a 3-D space, which is secured on and/or implanted in a patient's body. Doi teaches to utilize a correlation processor, which performs correlation processing respectively between each of the plurality of received signals (see paragraph [0017]). Dimmer teaches a termination of the excitation signal before a measurement phase (column 4, lines 43-45). However, none of these disclosures mention a matched filter for detecting interference. Acker'129 teaches the use of analog or digital band pass filtering and noise rejection devices to detect undesirable noise (column 5, lines 59-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate an interference detector as taught by Acker'129 in the system of Herron to detect and eliminate unwanted noise.

3. Claims 6-7, 9-12 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herron et al. (US Patent Application No. 2004/0125916) in view of Dimmer'842 (US Patent No. 6,812,842). Herron et al. discloses a system for the localization of a leadless marker in a 3-D space, which is secured on and/or implanted in a patient's body. The system uses a linear accelerator to deliver a radiation beam to a selected target in a patient (see paragraph [0023]). The panel assembly is coupled to a central processor, which calculates the marker assembly (see paragraphs [0025] and [0041]). However, Herron et al. does not discuss synchronizing the radiation source with the processor. Dimmer'842 teaches a termination of the excitation signal before a measurement phase (column 4, lines 43-45). The sensor array and the signal processor are configured to begin measuring the marker signal after one cycle of the marker assembly (column 13, line 19-27). It would have been obvious to one having ordinary skill in the art at the time the invention was made to de-activate the excitation source prior to measuring the marker to avoid the difficult process of separating the small marker signal from the much more powerful source excitation signal (column 6, lines 38-42).

With regards to claims 9 and 14, see column 13, line 19-27. While this does not teach a direct wire connection between the source coils and the receiver, a wireless signal from the markers is used as the indicator for the processor to begin measuring.

4. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herron et al. (US Patent Application No. 2004/0125916) in view of Dimmer'842 (US Patent No. 6,812,842), further in view of Acker'129 (US Patent No. 5,729,129). Herron et al. discloses a system for the localization of a leadless marker in a 3-D space, which is secured on and/or implanted in a patient's body. Dimmer'842 teaches a termination of the excitation signal before a measurement phase (column 4, lines 43-45). However, neither Herron nor Dimmer discusses a matched filter for detecting interference. Acker'129 teaches the use of analog or digital band pass filtering and noise rejection devices to detect undesirable noise (column 5, lines 59-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate an interference detector as taught by Acker'129 in the system of Herron to detect and eliminate unwanted noise.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Kish whose telephone number is 571-272-5554. The examiner can normally be reached on 8:30 - 5:00 ~ Mon. - Fri..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3737

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMK

Art Unit 3737



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